



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	)	Examiner: Unknown
D. Wu	)	
	)	Art Unit: 3739
Serial No.: 09/993,426	)	
	)	Confirmation: 6865
Filed: November 16, 2001	)	
	)	
For: MULTIPLE PREPARATORY	)	
EXCITATIONS AND READOUTS	)	
DISTRIBUTED OVER THE	)	
CARDIAC CYCLE	)	
	)	
Attorney Docket No.:	)	Cleveland, Ohio 44114
PKR 2 0715	)	February 1, 2002

REQUEST FOR CORRECTED FILING RECEIPT

PETITION TO ACCORD THE FILING DATE SHOWN ON THE  
EXPRESS MAIL LABEL "DATE-IN"

Commissioner For Patents  
Customer Service Center  
Initial Patent Examination Division  
Washington, D.C. 20231

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Dear Sir:

The Applicant filed the above-referenced patent application using the standard express mail filing procedure on November 16, 2001. The transmittal letter, the initial information data sheet, and the first page of the patent application (Exhibit 1) were all clearly marked with the express mail label number and the November 16, 2001 deposit date. All of the certificates were appropriately signed.

This is confirmed by the express mail customer copy (Exhibit 2). The information in the section "Origin (Postal Use Only)" was all filled in by the acceptance clerk at the U.S. Post Office. This section also identifies the mailing date as November 16, 2001.

Although the express mailing labels and the certificate of mailings all clearly identified the mailing date of this patent application as November 16, 2001, the Patent Office Filing Receipt (Exhibit 3) which was mailed January 18, 2002 and received January 25, 2002 listed the filing date as November 26, 2001. It is submitted that the filing date on the Patent Office Filing Receipt is in error. In fact, the U.S. Postal Services delivery

confirmation (Exhibit 4) shows delivery to the Patent Office on November 23, 2001.

Because the error in the filing date is a result of the Patent Office mistake, it is submitted that no fee is due.

In the alternative, the Applicant's petition to have the above-identified patent application accorded the "Date-In" of November 16, 2001 shown on express mail label EL852685033US. It is contended that the date of November 26, 2001 accorded as the filing date of this application by the PTO is not correct.

This discrepancy was discovered upon reviewing the Filing Receipt which was received on January 25, 2002. This Petition is being filed promptly, within a few days, of the erroneous Filing Receipt.

A true copy (Exhibit 1) of the first page of the correspondence which was filed which shows both the date on which this correspondence was mailed as express mail label number EL852685033US and that the number of the express mail was placed thereon prior to mailing.

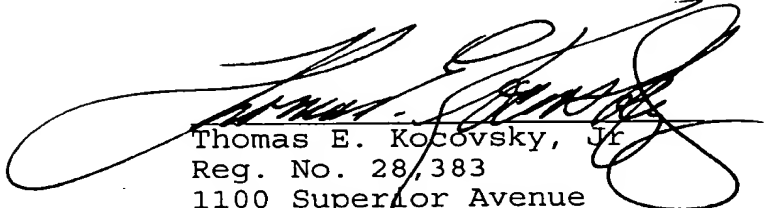
A true copy (Exhibit 2) of the express mail mailing label showing the "Date-In" of November 16, 2001 is attached.

Because the error in according the filing date was solely due to Patent Office error, it is submitted that no fee is due. If, it should be determined that the 37 C.F.R. 1.17(h) fee should be accessed against the Applicant for correcting this Patent Office error, that authorization is given to charge Deposit Account No. 06-0308. Please charge any additional fees which may be required by this paper and credit any overpayment to the Deposit Account No. identified above.

A duplicate copy of this paper is attached.

Respectfully submitted,

FAY, SHARPE, FAGAN,  
MINNICH & MCKEE, LLP



Thomas E. Kocovsky, Jr.  
Reg. No. 28,383  
1100 Superior Avenue  
Seventh Floor  
Cleveland, OH 44114-2518  
(216) 861-5582

CERTIFICATE OF MAILING

I hereby certify that this REQUEST FOR CORRECTED FILING RECEIPT / PETITION TO ACCORD THE FILING DATE SHOWN ON THE EXPRESS MAIL LABEL "DATE-IN" and NOTED EXHIBITS in connection with U.S. Patent Application . Serial No. 09/993,426 are being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner For Patents, Customer Service Center, Initial Patent Examination Division, Washington, D.C., 20231 on this 15<sup>th</sup> day of February, 2002.

By: Melary McNulty

FEB 19 2002

UTILITY PATENT APPLICATION TRANSMITTAL LETTER

The Assistant Commissioner  
For Patents  
Washington, D.C. 20231

Transmitted herewith for filing in the patent application of:

Dee H. WU

For: MULTIPLE PREPARATORY EXCITATIONS AND READOUTS DISTRIBUTED OVER THE CARDIAC CYCLE

Enclosed are:

- [XX] 32 pages of specification: 23 pages description; 8 pages claims; 1 page abstract.
- [XX] 18 sheets of drawing(s) including FIGURES 1-18C.
- [XX] A Declaration for Patent Application.
- [XX] An Assignment of the invention to PHILIPS MEDICAL SYSTEMS (CLEVELAND), INC.
- [XX] A Request & Certification Under 35 U.S.C. 122(b)(2)(B)(i).
- [XX] Utility Patent Application Initial Information Data Sheet.
- [XX] A Form PTO-1449 and \_\_ references.

CLAIMS AS FILED				
FOR	NO. FILED	NO. EXTRA	RATE	FEE
TOTAL CLAIMS	24 - 20 =	4	[XX] \$18 LARGE [ ] \$ 9 SMALL	\$ 72.00
INDEPENDENT CLAIMS	3 - 3 =	-	[XX] \$84 LARGE [ ] \$42 SMALL	\$ 0.00
BASIC FEE	[XX] LARGE ENTITY \$740 [ ] SMALL ENTITY \$370			
TOTAL FILING FEE \$				812.00

☐ Please charge Deposit Account No. 06-0308 in the amount of \$ \_\_\_\_\_.  
A duplicate copy of this sheet is enclosed.

☒ The Commissioner is hereby authorized to charge any additional fees which  
may be required at any time during the prosecution of this application  
without specific authorization, or credit any overpayment to Deposit Account  
No. 06-0308. A duplicate copy of this sheet is enclosed.

☒ A check in the amount of \$ 812.00 to cover the filing fee is enclosed.

16 Nov 2001  
Date

Thomas E. Kocovsky, Jr.  
Attorney of Record

Thomas E. Kocovsky, Jr.  
Reg. No. 28,383  
FAY, SHARPE, FAGAN,  
MINNICH & MCKEE, LLP  
1100 Superior Avenue, Seventh Floor  
Cleveland, Ohio 44114-2518  
(216) 861-5582

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Date of Deposit: NOVEMBER 16, 2001

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Assistant Commissioner for Patents Washington, D.C. 20231.

Hilary M. McNulty  
By: Hilary M. McNULTY

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UTILITY PATENT APPLICATION INITIAL INFORMATION DATA SHEET

The Assistant Commissioner  
For Patents  
Washington, D.C. 20231

**Inventor Information**

Inventor One Given Name:: Dee H.  
Family Name:: WU  
Postal Address Line One:: 2931 Huntington Rd.  
City:: Shaker Heights  
State:: Ohio  
Postal or Zip Code:: 44120

**Correspondence Information**

Name Line One:: Thomas E. Kocovsky, Jr.  
Name Line Two:: FAY, SHARPE, FAGAN,  
Name Line Three:: MINNICH & MCKEE, LLP  
Address Line One:: 1100 Superior Avenue  
Address Line Two:: Seventh Floor  
City:: Cleveland  
State or Province:: OH  
Postal or Zip Code:: 44114-2518  
Telephone One:: (216) 861-5582  
Fax:: (216) 241-1666  
Electronic Mail:: TKocovsky@faysharpe.com

**Representative Information**

Registration Number:: 28,383

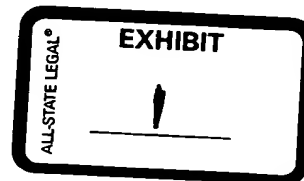
**Application Information**

Title Line One:: MULTIPLE PREPARATORY EXCITATIONS  
Title Line Two:: AND READOUTS DISTRIBUTED OVER THE  
Title Line Three:: CARDIAC CYCLE  
Total Drawing Sheets:: 18  
Formal Drawings?: Yes  
Application Type:: Utility  
Docket Number:: PKR 2 0715

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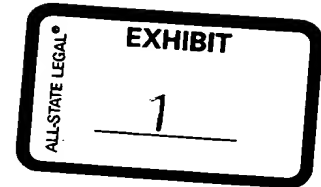
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Assistant Commissioner for Patents Washington, D.C. 20231.

*Hilary McNulty*  
By: Hilary M. McNULTY



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 Assistant Commissioner for Patents Washington, D.C. 20231.

*Hilary M. McNulty*  
 By: Hilary M. McNULTY



## MULTIPLE PREPARATORY EXCITATIONS AND READOUTS DISTRIBUTED OVER THE CARDIAC CYCLE

### Background of the Invention

The present invention relates to the medical imaging arts. It particularly relates to cardiac imaging using magnetic resonance imaging (MRI) techniques, and will be described with particular reference thereto. However, the invention will also find application in conjunction with other magnetic resonance-based imaging applications and other imaging applications in which a spatially or temporally selective preparatory excitation of the imaged subject is employed.

Magnetic resonance imaging (MRI) of the heart provides a powerful diagnostic and monitoring tool which is useful in treating coronary diseases and other heart ailments. MRI is non-invasive (except for contrast-enhanced MRI) and is capable of imaging quickly enough to monitor the cardiac cycle in real time. The combination of MRI with an electrocardiograph (ECG) that non-invasively monitors the cardiac cycle enables controlled medical imaging of selected phases of the cardiac cycle, e.g. the systolic or diastolic cardiac phases.

One application of cardiac MRI is measurement of the motion of the heart muscle. Forces, stresses, and strains on the heart during the cardiac cycle can be monitored by MRI. However, initially, the lack of spatial reference points made interpretation of MRI cardiac stress/strain images difficult.

The spatial modulation of magnetization (SPAMM) technique was developed to alleviate this difficulty. An



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EL 852685033 US

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## ORIGIN (POSTAL USE ONLY)

PO ZIP Code 44115	Day of Delivery <input checked="" type="checkbox"/> Next <input type="checkbox"/> Second	Flat Rate Envelope <input type="checkbox"/>
Date In 11-15-01	<input checked="" type="checkbox"/> 12 Noon <input type="checkbox"/> 3 PM	Postage \$ 19.15
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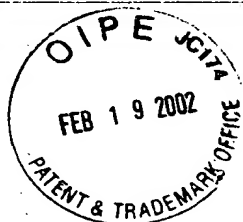
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APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/993,426	11/26/2001	3739	812	PKR 2 0715	18	24	3

Thomas E. Kocovsky, Jr.  
FAY, SHARPE, FAGAN, MINNICH & McKEE, LLP  
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Cleveland, OH 44114-2518

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CONFIRMATION NO. 6865

FILING RECEIPT

JAN 25 2002



\*OC000000007328195\*

FAY, SHARPE, BEALL, FAGAN,  
MINNICH & McKEE

Date Mailed: 01/18/2002

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

**Applicant(s)**

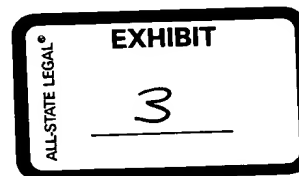
Dee H. Wu, Shaker Heights, OH;

**Assignment For Published Patent Application**

PHILIPS MEDICAL SYSTEMS (CLEVELAND), INC.;

**Domestic Priority data as claimed by applicant**

**Foreign Applications**



If Required, Foreign Filing License Granted 01/17/2002

Projected Publication Date: Request for Non-Publication Acknowledged

Non-Publication Request: Yes

Early Publication Request: No

**Title**

Multiple preparatory excitations and readouts distributed over the cardiac cycle

**Preliminary Class**



600

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**LICENSE FOR FOREIGN FILING UNDER  
Title 35, United States Code, Section 184  
Title 37, Code of Federal Regulations, 5.11 & 5.15**

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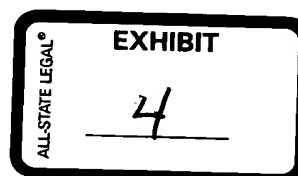




**UNITED STATES  
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Date: 01/28/2002

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Dear GARY CLIFFORD:

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